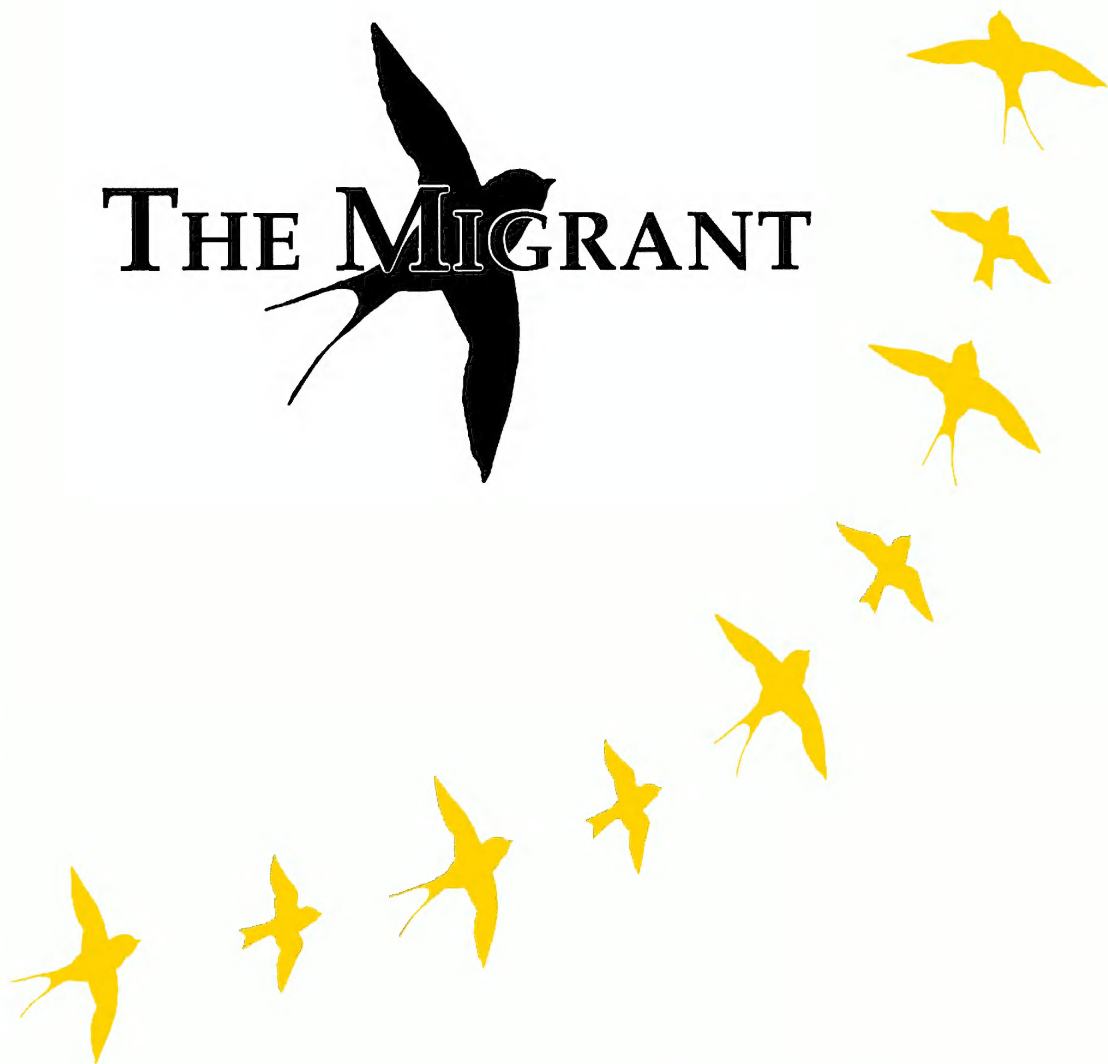




# THE MIGRANT



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DEVOTED TO TENNESSEE BIRDS

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## BIRD INVENTORY AT SHILOH NATIONAL MILITARY PARK, 2003–2005

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### ABSTRACT

A bird inventory was conducted at Shiloh National Military Park in Hardin County, Tennessee, from July 2003 to June 2005. Visits on 53 days were made in all seasons of this two-year period. During these visits birds were detected using five different survey methods: point counts, migration walks, night surveys, raptor surveys, and general surveys. As a result of the inventory, 187 species, including 85 breeding species, were detected in the park. Each species is assigned a status category, including whether or not and to what degree it is a breeder. In addition, each species' abundance during each season is specified. Specific recommendations to improve habitat in the park for birds are provided.

### INTRODUCTION

Shiloh National Military Park (SHIL), established in 1894 to commemorate one of the bloodiest battles of the Civil War, is a moderate-sized National Park Service unit that offers the visiting public a moderately rich bird fauna resulting from the diversity of habitats found within its boundaries. The purpose of this study was 1) to inventory the bird species occurring at SHIL; 2) to indicate the status and seasonal abundance of documented species; and 3) to develop management recommendations for improving bird habitat.

## STUDY SITE

Featuring over 600 monuments and iron troop markers, as well as 217 Civil War cannons, SHIL is also one of the best documented of all the Civil War battlefields because a gathering of all possible veterans of the action took place just five years following the battles there with many of the nation's foremost historians and surveyors in attendance to record for posterity the events of those fateful days in early April 1862 and their precise locations. Besides preserving the sites of battles, SHIL is also the site of a national cemetery, still active to this day; the remains of many of the battle's 23,746 casualties are buried in the cemetery. Another important feature of this park service unit is Shiloh Indian Mounds National Historic Landmark, located on bluffs overlooking the Tennessee River. Preserving six platform mounds, this site is the finest surviving Mississippian mound-builder village in the Tennessee Valley. The culture represented at this site peaked about A.D. 1200.

Shiloh National Military Park is located on the western shore of the Tennessee River (Kentucky Lake) about 16 km downriver from the town of Savannah in Hardin County, Tennessee (Figure 1). In 2003 it encompassed 1629 ha, but the park increased in size somewhat since that year as a result of land purchases in the northeastern and southeastern sectors of the park.

Elevation in the park ranges from 120 m at the shoreline of the Tennessee River to about 180 m on the river bluffs and adjacent uplands. Above the floodplains along the Tennessee River, some quite steep hills and drop-offs are present. The surface layer of soil in the park is thin except in the floodplains. The bluffs consist of terrace soils, mainly Savannah silt loam type. Small streams in the park are gravel-bottomed, and there are many dry, steep gullies; undergrowth along the streams and gullies is often quite dense.

The eastern border of the park is the Tennessee River, a fairly large waterway used extensively for water-borne transportation; besides the occasional paddle-wheeler and many recreational fishing boats, commercial barge traffic on the river can be almost constant at times. Pickwick Dam, located upriver near Savannah, is a hydro-electric facility; when generating power, the dam releases large amounts of water that can alter the level of the river 1.5–2 m and cause water to back up through Brown's Landing into the floodplain within the park just south of the Indian Mounds and roughly 3 km from the northeastern boundary. Most of the remaining part of the park that borders the river is located on high bluffs including, from north to south, a mature forest, the national cemetery, River Drive, and a former agricultural area that now features several large beaver ponds and a riparian forest. These beaver ponds are well established and increasing. Paralleling the Tennessee River and maintaining a stable water level throughout the year, they host the greatest variety of birds and amphibians in the park. Besides providing nesting habitat for some unusual birds in the park, they are extremely attractive to a broad range of migrant birds during spring and fall, as well as waterfowl during winter.

The northeastern sector of SHIL is the most "park-like" part of the park with large trees and many mowed areas; this area is also where most of the developed sites within the park are located. The grounds of the Visitor Center and its parking area are good for finding

birds. A large maintenance complex, old residential areas for park employees, the national cemetery, and Pittsburgh Landing are all located a short distance from one another in this part of the park.

In the northwestern sector of the park, the Owl Creek bottomlands encompass a large floodplain that contains several large beaver ponds, and in the extreme northwestern corner of the park a large sod farm operation lies along the park boundary. Along the Hamburg-Savannah Rd. (a jeep trail) is an old-growth forest where stands of very large oaks grow in a floodplain. Record rainfall events during the inventory, combined with high winds, blew over about 20% of these oaks. Trees growing in usually wet and often flooded bottomlands near a large picnic area west of Rt. 22 include many black tupelos, water tupelos, and willows; various wetland grasses are also present.

The southwestern area of the park north of Rt. 142 borders another large sod farm operation and some smaller farms. The extreme southwestern area borders rural housing areas and small farms. This part of the park has extensive woodlands including a heavy mix of pines.

Besides bottomlands associated with Owl Creek, Glover Branch, Dill Branch, and three streams that converge at Brown's Landing, there are several scattered locations in the park where bowl-like depressions hold water for long periods of time and create fair-sized wet areas in the forest. One such area with a spring creates Bloody Pond, which is shallow and tree surrounded. Another such area is Water Oaks Ponds, also possessing a spring; it lies in a semi-open area and has wetland vegetation that is mowed regularly when it is dry. Both of these "ponds" are located in the central area of the park. However, most of the central area is dry upland wooded habitat characterized by hickories, red and black oaks, and occasional cedars and pines. Indeed, 65% of the park is now wooded, as it was at the time of the Battle of Shiloh; the remainder is open and includes about 200 ha maintained in mowed grass. One leased field along East Corinth Rd. was cultivated in millet and winter wheat during the inventory. These crops were harvested and completely removed by the lessee. The park also maintains two small peach orchards near Corinth for historical purposes. Near Corinth Rd. and Reconnoitering Rd. there is a large field that is mowed less than most of the fields; containing a mix of native grasses, this field was one of the most productive for field-obligate birds.

Several small but productive shrub-scrub sites were found. The largest was near the leased field. Perhaps because it had almost outgrown the shrub-scrub stage, it was used less by birds at the end of the inventory period than it was near the beginning of the inventory.

Bottomland water oaks and hackberry are well represented in the park and are an important food resource for birds. The park contains very little herbaceous growth; poison ivy, grapevines, and green-briar dominate as ground cover in the forests. The Owl Creek bottomlands have native grasses, willows, and small trees, and more mature trees occur along their edges. Cane is starting to dominate some of the riparian forest near the Tennessee River; in general, that area has the greatest variety of herbaceous plant-life in the park.

## METHODS—BIRD INVENTORY TECHNIQUES

The five inventory techniques employed—point counts, migration walks, night surveys, raptor surveys, and general inventory work—were identical to the techniques used to inventory the avifauna of Stones River National Battlefield during the same years (Stedman and Stedman 2007); see that source for a description of the techniques. Twenty-one plots for conducting point counts were established in SHIL, and these were surveyed using the point count method during June 2004 and June 2005. Migration walks were conducted 9 times during spring and 10 times during fall. Night surveys took place 18 times during all seasons and raptor surveys 5 times during winter. General inventory effort was expended during nearly all dates (see Results) when the park was visited.

## RESULTS

### *Total Species Inventoried*

During the inventory period, Barbara Stedman made visits to the unit on a total of 53 days during all seasons from July 2003 to June 2005 (13 days during spring; 12 during summer; 16 during fall; and 12 during winter). In the course of these visits she observed 187 species (Table 1) by one or more of the methods described above; an additional 17 species have been recorded historically in the park, bringing the total park list of birds to 204 species (Table 1).

Some negative factors that kept the number of species detected by Barbara Stedman during the inventory from being greater are noted below.

- During spring and early summer of each year of the inventory above normal rainfall was experienced, resulting in flood conditions in many areas of the park. See “Influence of Weather” below.
- Lack of sizable shrub-scrub habitat and the mowing of fields to keep the grass very short limited the presence of some grassland species in all seasons.
- Lack of any mudflats for shorebird habitat except in a few small areas prevented more species in this group from being detected.
- Loud traffic on some roads in the park, especially Rt. 22, much of each day limited the ability to hear birdsong for considerable distances on either side of the road in those areas.
- Duck hunting outside the park and its attendant gunfire affected many species of birds inside the park that were near hunting areas, such as the Owl Creek bottomlands; the sound of gunfire caused many species, including raptors, to take flight when it occurred; if it occurred enough, these species abandoned roosts near affected areas.
- Loud boat traffic on the Tennessee River disturbed roosting raptors along the park's bluffs, ducks foraging or roosting on nearby beaver ponds, or even songbirds, which stopped singing when such disturbances were nearby.

### *Species Inventoried*

Evidence of breeding by species using the unit was divided into three categories: possible

evidence; probable evidence; and confirmed evidence. In all, 85 species (Table 1) were placed in one of these categories, including 5 (6%) possible breeders, 26 (30%) probable breeders, and 54 (64%) confirmed breeders.

Point counts were conducted during the breeding period of many species. A total of 67 species was registered by Barbara Stedman during 21 point counts conducted during 2003, while 65 species were detected by the same observer during the same point counts conducted during 2004. In all, point count effort led to data for 70 species of birds (Table 2), all of which use SHIL during the breeding season.

### ***Species Composition of the Isolated Units***

Generally speaking, the larger and more diverse in habitat a site is, the larger the number of bird species that will be found in it. This rule of thumb was thoroughly borne out by the data obtained during this survey; i.e., SHIL is a moderately large park with diverse habitats, and its bird list is correspondingly moderately large and diverse.

## **DISCUSSION**

Overall results of the inventory were quite good, as was expected, but the initial expectation regarding numbers and diversity of grassland species fell well short. Numbers of raptor species and overall numbers of raptors were low in all seasons, but especially for raptors dependent on grasslands for food resources. The following park policies account in large measure for the low number of grassland species at SHIL:

- mowing often and very close to the ground dramatically decreases grassland bird species in the park;
- using commercial lawn-type grasses, rather than native species, is also detrimental to grassland birds;
- mowing in wetland areas whenever they are dry enough to be mowed also inhibits use of these areas by grassland species during dry periods;
- mowing right up to the forest edge without leaving a buffer zone of tall grass and shrubs to provide food and cover further diminishes the presence of grassland and shrub-scrub species such as quail, sparrows, and meadowlarks.

The Grasshopper Sparrow is a grassland species especially expected to occur in some numbers at SHIL, but there were few records except from areas where no park mowers operated. Shrub-scrub species such as Prairie Warbler and Field Sparrow were also detected in low numbers, mainly because shrub-scrub habitat is also limited in extent in the park. Wintering species that use grassland and shrub-scrub habitats were also limited in the park. Vultures, harriers, kestrels, Peregrine Falcons and shrikes were also detected in low numbers, another indication of the depressing effect of the park's grassland practices.

### ***Comparative Effectiveness of Survey Techniques***

Each of the five survey techniques used for this inventory was effective for its purpose, but in terms of generating the largest number of species per unit of time expended, the

general inventory was probably the most effective, followed by the migration walk and the point count (for breeding species only). Due to their restricted emphasis, night surveys and raptor surveys generated fewer species per unit of time expended, but the quality of the species detected by these methods was high.

### ***Unexpected Results***

The density of birds breeding in the old-growth area of the park was much greater than expected. The Owl Creek bottomlands were much more productive as habitat for migrant and breeding birds than expected. For instance, a singing Le Conte's Sparrow was noted in this area, as well as a singing Connecticut Warbler, both rarities when found in Tennessee, especially the former. Other rare migrants found in this area were American and Least bitterns, the former in the beaver ponds in the extreme southeastern part of the park. Breeding birds found within this area included Green Heron, Willow Flycatcher, White-eyed Vireo, Prothonotary Warbler, Common Yellowthroat, and Yellow-breasted Chat.

Beaver ponds were not expected as part of the park ecosystem at SHIL; they have been present in the park only a short time, but they are increasing in size and being colonized by wetland vegetation. Many species of wetland birds could become breeders in the park if these ponds are allowed to continue as part of the park ecosystem.

A pair of Bald Eagles has nested for years about 1.6 km downriver from the park, but it was unexpected to find during summer 2004 that another pair was building a nest directly across the river from the park; this pair collected nest material in the park and hunted regularly in the southeastern border of the park, so it was part of their territory.

Perhaps not too unexpected was the sighting of a Eurasian Collared-Dove at the national cemetery (and at other areas near the park); this exotic dove is increasing throughout west Tennessee along the Mississippi River, so it should undergo the same kind of expansion along the Tennessee River.

Quite unexpected on 17 September 2003 was the observation of a singing Bell's Vireo. Prior to 1997 (Nicholson 1997) there were only a half dozen Tennessee records of this species, which is considered a rare breeder in the state.

The number of Prothonotary Warblers nesting in the park was much higher than expected.

One Swainson's Warbler, a species of special concern, was somewhat unexpectedly located in a canebrake in the extreme southeastern section of the park. This species is rare in the south-central part of Tennessee (Nicholson 1997). Monitoring of this area in the future may establish the species as more regular there than was thought to be the case.

### ***Bird Species Not Found***

Some species of warblers, including Blue-winged, Black-and-white, Cerulean, and Worm-eating, were either absent or in low numbers. In particular, Cerulean Warblers were deemed unusual absentees because habitat for their breeding appears to be present in the park.

Bewick's Wren has been found breeding historically in the park, but it was not found during the inventory despite diligent searches. The species likes to nest in cluttered areas, such as log debris piles; few such sites are present in the park. Should this wren ever reappear as a nester in the park, great care to prevent disturbing the birds should be exercised.

### ***Influence of Weather on Results***

An effort was made to visit SHIL during periods when the weather was conducive for registering the maximum number of species during general inventory work, migration walks, point counts, night surveys, and raptor surveys, so the influence of weather on the results of the overall inventory was generally positive.

During spring migration period of the first year of the bird inventory, flooding and high wind conditions resulted in the downing of many trees in areas which harbor large numbers of songbirds; the downed trees prevented access to these sites, probably depressing the number of species detected in the park. During the second spring of the inventory, wet conditions again prevailed but access to birding sites was not prevented by downed trees, and the wet conditions probably caused many migrants to land and stay a few days, perhaps increasing the number of species detected in the park.

Each summer of the inventory began with very wet conditions; the first summer in particular had so much flooding that many bottomland nesters could well have had to nest outside the park, or they may have started nesting later in the season when water receded, but also after the point counts were conducted.

Temperatures during both winters of the inventory were slightly above average; there was very little snow and little or no invasion of winter finches such as Pine Siskins, field birds such as Horned Larks and longspurs, or irruptive raptors such as Rough-legged Hawk.

During the second winter of the inventory a major failure of the mast crop was experienced in the region around SHIL; most oaks and hickories failed to produce nuts perhaps as a result of the excessive flooding earlier in the year. However, in SHIL many of the older oaks and mast-producing trees still managed to produce a good crop, causing many (175+) Red-headed Woodpeckers and other woodpeckers to winter there. Wood Ducks were in good numbers in the beaver ponds as well.

Frontal passages from late fall through winter into spring sometimes caused impressive migrations of water-related birds to occur along the Tennessee River. The early and middle part of the fall migration each year lacked strong cold fronts. The lack of such fronts in combination with a plentiful supply of food resources in SHIL each fall caused many migrants of many species to linger in the park, taking a respite from their travels and gaining body fat. Such gatherings of migrants were especially noteworthy in the forests along the Tennessee River.

## **RECOMMENDATIONS FOR MANAGEMENT AND PROTECTION OF SIGNIFICANT HABITATS**

- Revise the mowing regime in the park to be more bird and wildlife friendly;

- Avoid mowing wetlands sites down to short grass (mow infrequently and leave the grass at least 15 cm high after mowing; in particular, the wetland grasses around Water Oak Pond should be maintained with as little mowing as possible);
- Create grassland and shrub-scrub buffer zones between grassland and forested areas, making these 15 m wide where possible; such areas can be bush-hogged once per year in late July to maintain a height of 1-1.5 m;
- Leave a 15 m corridor of unharvested crops around any field that is planted with millet or wheat;
- Create more shrub-scrub habitat maintained at 2-3 meter this is a productive habitat used by many species;
- Create more native grass fields like the one on Reconnoitering Rd.;
- Allow log debris piles that result from field clearing operations to rot naturally, encouraging many species to use them for foraging and nesting sites, especially Bewick's Wrens.

### ***Suitability of Habitat for Persistence of Sensitive Species***

Currently, the many beaver ponds in the park are being maintained by the beavers; as long as these beaver ponds are allowed to exist, they will host a variety of wetland birds of conservation concern. Disturbance to these ponds will result in loss of such species.

### **ACKNOWLEDGMENTS**

We thank Stacy Allen, Ranger and Resource Manager at SHIL, for coordinating all of Barbara H. Stedman's visits to the park. He helped make all parts of the park accessible and visits to them productive.

Dennis Turnbo was the ranger responsible for Barbara Stedman's introduction to most sites within the park, spending many hours making her familiar with less visited sites that included wet areas, beaver ponds, old-growth forests, and recently acquired properties not shown on maps. He also made available all the historical bird records in the park files. His love for the park and its wildlife was obvious, and he provided valuable insight about the birds and different habitats in the park. Although he retired about six months after the bird inventory began with 30 years in the NPS, the information he provided and the interest he showed were responsible for starting the bird inventory on the fast track.

Marcus Johnson returned to the park fulltime, following a stint as part-time NPS employee and full-time student, about six months after the bird inventory was initiated. He was very enthusiastic about all the inventories in the park and accompanied Barbara Stedman on most of her inventory trips there, traveling from park boundary to park boundary and entering many swamps, deep muddy areas, flooded streams, steep bluffs, and beaver ponds. His conversations with her covered all the techniques for collecting bird data listed in this report, all the habitats of the park, and all the management programs required to maintain healthy bird populations in the park, as well as the various methods that could be used to involve the public in bird surveys in the park and to increase public appreciation of birds in the park.

Ranger Rick Welch came to SHIL more than a year after the bird inventory began. He had already acquired an interest in birds, so he was able to provide Barbara Stedman with information that assisted with the bird inventory. Since he lived in a forested area of the park and maintained bird feeders, he was able to offer information that led to more complete knowledge of the seed-eating birds using the park. He also assisted with some of the night surveys she conducted. His interest and bird records were much appreciated.

The entire Maintenance Department at SHIL was helpful, informative, and friendly during the two years of the bird inventory, and all its members are to be especially thanked for maintaining all of the park's gated dirt roads in drivable condition so that the various bird surveys could be conducted in a timely manner.

Tom Diggs materially assisted the success of the bird inventory by flagging the sites of many plots used for point counts.

Special acknowledgment goes to all persons who shared historical bird records in the park. The Memphis Chapter of the Tennessee Ornithological Society made 57 field trips to SHIL between 1933 and 1997 (Martha Waldron letter to K. Higgins, NPS, 8 July 1997); Waldron also prepared a park checklist based on those data. Ben B. Coffey, Jr., park ranger James W. Howell, and resource management specialist Dean Berg also prepared earlier checklists. Robert Ford and Damien Simbeck contributed records as well. These data provided a broad view of the birdlife in the park because some of the birds breeding in the park in earlier decades are no longer present in the park or in nearby areas.

The staff of the Center for the Management, Utilization, and Protection of Water Resources at Tennessee Technological University provided high quality management of the fiscal paperwork associated with this bird inventory. Director Dennis George, Sandra Pigg, Yvette Clark, Amy Knox, and especially Glenda Sharks and Mary Williford contributed much to the success of the inventory.

Whitney M. Fuquay helped create the map of SHIL. Teresa Leibfreid, National Park Service (NPS) Inventory and Monitoring Coordinator for the Cumberland Piedmont Network, was dedicated and supportive throughout the duration of this bird inventory, which was funded by an NPS grant (Tennessee Technological University contract # H5000030200).

### LITERATURE CITED

- Nicholson CP. 1997. *Atlas of the Breeding Birds of Tennessee*. University of Tennessee Press, Knoxville, Tennessee. 426p.
- Stedman BH, Stedman SJ. 2007. Bird Inventory at Stones River National Battlefield, 2003–2005. *The Migrant* 78(2): 45–57.

Figure 1. Map of Shiloh National Military Park displaying land cover in and around the unit, located near Savannah, Hardin County, Tennessee.

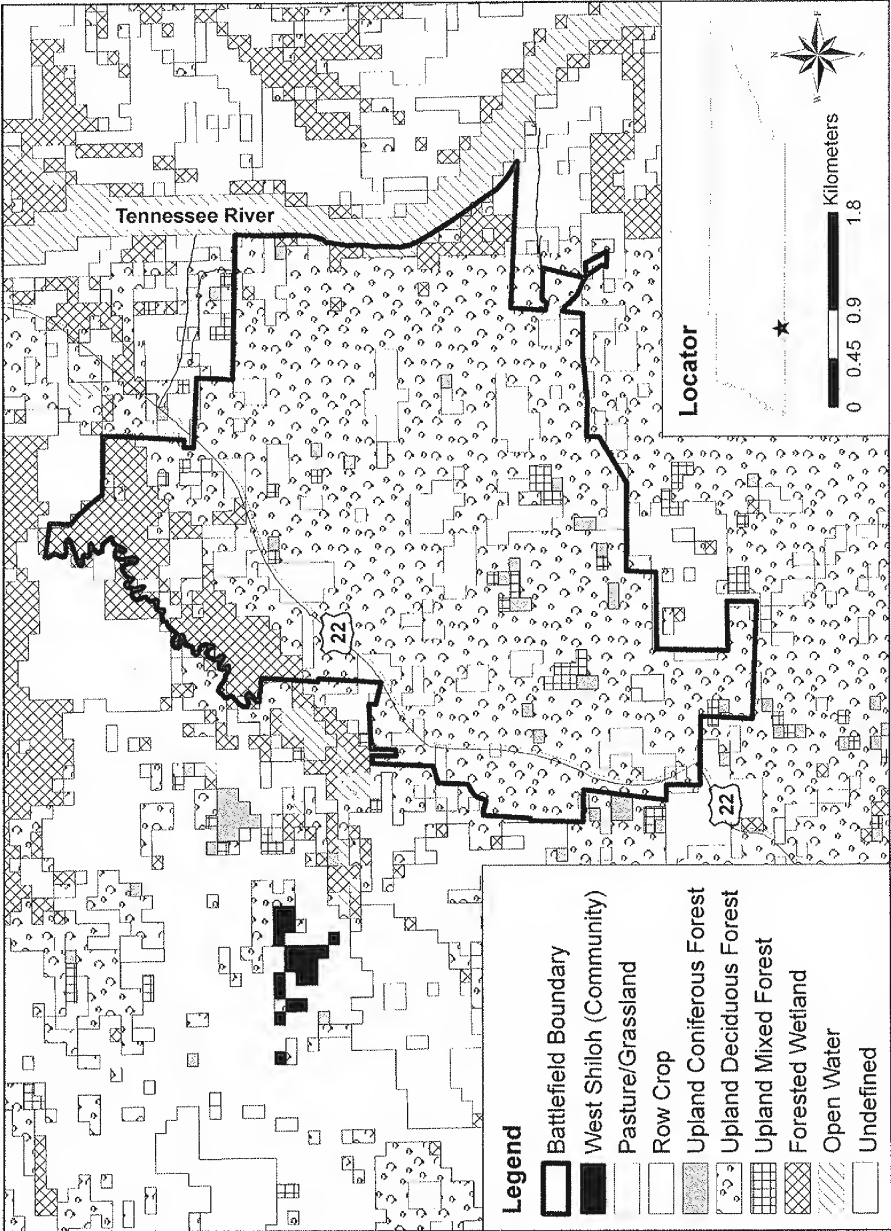


Table 1. Status and seasonal abundance of 187 bird species observed at Shiloh National Military Park during 2003–2005 inventory; 17 additional species are listed as a result of historical fieldwork, the common names of these species being presented in CAPS. Key to symbols and abbreviations: \* possible breeding evidence noted; \*\* probable breeding evidence noted; \*\*\* confirmed breeding evidence noted; PR—permanent resident, SR—summer resident, TR—transient, VR—visitor, WR—winter resident; A—abundant (25+ individuals /day); C—common (10–24 individuals/day); FC—fairly common (5–9 individuals/day); U—uncommon (1–4 individuals/day); VU—very uncommon (2–5 records/season); R—rare (on average 1 record or fewer/season); seasonal codes that result from historical information are underlined.

| Common Name              | Scientific Name              | Status | Sp        | Su       | Fa        | Wi        |
|--------------------------|------------------------------|--------|-----------|----------|-----------|-----------|
| Snow Goose               | <i>Chen caerulescens</i>     | WR     |           |          | VU        | VU        |
| Canada Goose             | <i>Branta canadensis</i>     | WR     |           |          | U         | U         |
| Wood Duck                | <i>Aix sponsa</i>            | PR***  | U         | U        | U         | U         |
| Gadwall                  | <i>Anas strepera</i>         | WR     | VU        |          |           |           |
| American Wigeon          | <i>Anas americana</i>        | WR     | VU        |          |           |           |
| American Black Duck      | <i>Anas rubripes</i>         | WR     |           |          | VU        | VU        |
| Mallard                  | <i>Anas platyrhynchos</i>    | PR*    | U         | R        | VU        | U         |
| Blue-winged Teal         | <i>Anas discors</i>          | TR     | VU        | R        | VU        |           |
| Northern Shoveler        | <i>Anas clypeata</i>         | WR     | VU        |          |           | VU        |
| Green-winged Teal        | <i>Anas crecca</i>           | WR     |           |          |           | VU        |
| CANVASBACK               | <i>Aythya valisineria</i>    | WR     | <u>VU</u> |          | <u>VU</u> | <u>VU</u> |
| Redhead                  | <i>Aythya americana</i>      | WR     | VU        |          |           |           |
| Ring-necked Duck         | <i>Aythya collaris</i>       | WR     |           |          | VU        |           |
| Common Goldeneye         | <i>Bucephalus clangula</i>   | WR     |           |          |           | VU        |
| Hooded Merganser         | <i>Lophodytes cucullatus</i> | WR     | VU        |          |           | U         |
| Northern Bobwhite        | <i>Colinus virginianus</i>   | PR*    | U         | U        | U         |           |
| Wild Turkey              | <i>Meleagris gallopavo</i>   | PR***  | C         | A        | A         | C         |
| Common Loon              | <i>Gavia immer</i>           | TR     | R         |          | R         | R         |
| Pied-billed Grebe        | <i>Podilymbus podiceps</i>   | WR     | VU        |          |           |           |
| HORNED GREBE             | <i>Podiceps auritus</i>      | TR     | <u>R</u>  |          | <u>R</u>  | <u>R</u>  |
| Double-crested Cormorant | <i>Phalacrocorax auritus</i> | TR     | VU        | VU       | U         | U         |
| American Bittern         | <i>Botaurus lentiginosus</i> | TR     | R         |          | R         |           |
| Least Bittern            | <i>Ixobrychus exilis</i>     | UN     |           | R        |           |           |
| Great Blue Heron         | <i>Ardea herodias</i>        | PR***  | U         | U        | U         | U         |
| Great Egret              | <i>Ardea alba</i>            | VR     | U         | R        | U         |           |
| Snowy Egret              | <i>Egretta thula</i>         | TR     | VU        | <u>R</u> | <u>VU</u> |           |

| Common Name               | Scientific Name                  | Status | Sp        | Su | Fa        | Wi |
|---------------------------|----------------------------------|--------|-----------|----|-----------|----|
| Little Blue Heron         | <i>Egretta caerulea</i>          | TR     | VU        |    |           |    |
| Green Heron               | <i>Butorides virescens</i>       | SR**   | U         | U  | U         |    |
| Black-crowned Night-Heron | <i>Nycticorax nycticorax</i>     | WR     |           |    |           | VU |
| Black Vulture             | <i>Coragyps atratus</i>          | PR     | VU        |    | U         | U  |
| Turkey Vulture            | <i>Cathartes aura</i>            | PR***  | U         | U  | U         | U  |
| Osprey                    | <i>Pandion haliaetus</i>         | TR     | VU        |    | R         |    |
| Bald Eagle                | <i>Haliaeetus leucocephalus</i>  | PR     | U         | VU | U         | U  |
| Northern Harrier          | <i>Circus cyaneus</i>            | WR     | <u>VU</u> |    | <u>VU</u> | VU |
| Sharp-shinned Hawk        | <i>Accipiter striatus</i>        | WR     | VU        |    | U         | U  |
| Cooper's Hawk             | <i>Accipiter cooperi</i>         | UN     | VU        | R  | U         | VU |
| Red-shouldered Hawk       | <i>Buteo lineatus</i>            | PR***  | U         | U  | U         | U  |
| Broad-winged Hawk         | <i>Buteo platypterus</i>         | SR**   | U         | U  | U         |    |
| Red-tailed Hawk           | <i>Buteo jamaicensis</i>         | PR***  | U         | U  | U         | U  |
| American Coot             | <i>Fulica americana</i>          | TR     |           |    | VU        |    |
| American Golden-Plover    | <i>Pluvialis dominica</i>        | TR     | VU        |    |           |    |
| SEMIPALMATED PLOVER       | <i>Charadrius semipalmatus</i>   | TR     | <u>VU</u> |    | <u>VU</u> |    |
| Killdeer                  | <i>Charadrius vociferus</i>      | PR**   | U         | U  | U         | U  |
| SPOTTED SANDPIPER         | <i>Actitis macularius</i>        | TR     | R         |    | R         |    |
| Solitary Sandpiper        | <i>Tringa solitaria</i>          | TR     | R         |    | R         |    |
| Lesser Yellowlegs         | <i>Tringa flavipes</i>           | TR     |           |    | R         |    |
| Pectoral Sandpiper        | <i>Calidris melanotos</i>        | TR     | VU        |    |           |    |
| Wilson's Snipe            | <i>Gallinago delicata</i>        | TR     | U         |    |           | U  |
| American Woodcock         | <i>Scolopax minor</i>            | TR     | VU        |    | R         | VU |
| Bonaparte's Gull          | <i>Chroicocephalus</i>           | WR     | <u>U</u>  |    | <u>U</u>  | U  |
| Ring-billed Gull          | <i>Larus delawarensis</i>        | WR     | FC        |    | U         | FC |
| Herring Gull              | <i>Larus argentatus</i>          | WR     | VU        |    | U         | U  |
| Caspian Tern              | <i>Hydroprogne caspia</i>        | TR     | VU        |    |           |    |
| Black Tern                | <i>Chlidonias niger</i>          | TR     |           |    | R         |    |
| COMMON TERN               | <i>Sterna hirundo</i>            | TR     | <u>R</u>  |    | <u>R</u>  |    |
| Forster's Tern            | <i>Sterna forsteri</i>           | TR     | VU        |    | VU        |    |
| Rock Pigeon               | <i>Columba livia</i>             | PR     | VU        | VU | VU        | VU |
| Eurasian Collared-Dove    | <i>Streptopelia decaocto</i>     | VR     |           | R  |           |    |
| Mourning Dove             | <i>Zenaida macroura</i>          | PR**   | C         | A  | A         | C  |
| Yellow-billed Cuckoo      | <i>Coccyzus americanus</i>       | SR***  | U         | FC | FC        |    |
| Black-billed Cuckoo       | <i>Coccyzus erythrophthalmus</i> | TR     | R         |    | R         |    |
| Barn Owl                  | <i>Tyto alba</i>                 | PR     |           |    | R         |    |

| Common Name               | Scientific Name                 | Status | Sp       | Su       | Fa       | Wi       |
|---------------------------|---------------------------------|--------|----------|----------|----------|----------|
| Eastern Screech-Owl       | <i>Megascops asio</i>           | PR**   | U        | U        | U        | U        |
| Great Horned Owl          | <i>Bubo virginianus</i>         | PR***  | U        | U        | U        | U        |
| Barred Owl                | <i>Strix varia</i>              | PR***  | U        | U        | U        | U        |
| Common Nighthawk          | <i>Chordeiles minor</i>         | TR     | R        |          | VU       |          |
| Chuck-will's-widow        | <i>Antrostomus carolinensis</i> | SR***  | FC       | FC       | U        |          |
| Eastern Whip-poor-will    | <i>Antrostomus vociferus</i>    | SR**   | U        | VU       | VU       |          |
| Chimney Swift             | <i>Chaetura pelagica</i>        | SR***  | U        | U        | U        |          |
| Ruby-throated Hummingbird | <i>Archilochus colubris</i>     | SR**   | U        | U        | FC       |          |
| Belted Kingfisher         | <i>Ceryle alcyon</i>            | PR**   | U        | U        | U        | U        |
| Red-headed Woodpecker     | <i>Melanerpes</i>               | PR***  | U        | U        | U        | U        |
| Red-bellied Woodpecker    | <i>Melanerpes carolinus</i>     | PR***  | FC       | FC       | FC       | FC       |
| Yellow-bellied Sapsucker  | <i>Sphyrapicus varius</i>       | WR     | VU       |          | U        | U        |
| Downy Woodpecker          | <i>Picoides pubescens</i>       | PR***  | FC       | U        | FC       | FC       |
| Hairy Woodpecker          | <i>Picoides villosus</i>        | PR***  | U        | U        | U        | U        |
| Northern Flicker          | <i>Colaptes auratus</i>         | PR***  | U        | U        | FC       | U        |
| Pileated Woodpecker       | <i>Dryocopus pileatus</i>       | PR***  | FC       | U        | FC       | FC       |
| American Kestrel          | <i>Falco sparverius</i>         | TR     | <u>U</u> | <u>U</u> | R        | U        |
| OLIVE-SIDED FLYCATCHER    | <i>Contopus cooperi</i>         | TR     |          | R        |          |          |
| Eastern Wood-Pewee        | <i>Contopus virens</i>          | SR***  | FC       | FC       | FC       |          |
| Acadian Flycatcher        | <i>Empidonax virens</i>         | SR***  | FC       | FC       | U        |          |
| Willow Flycatcher         | <i>Empidonax traillii</i>       | SR**   |          | R        |          |          |
| Least Flycatcher          | <i>Empidonax minimus</i>        | TR     | VU       |          |          |          |
| Eastern Phoebe            | <i>Sayornis phoebe</i>          | PR***  | FC       | FC       | FC       | U        |
| Great Crested Flycatcher  | <i>Myiarchus crinitus</i>       | SR**   | U        | U        | U        |          |
| Eastern Kingbird          | <i>Tyrannus tyrannus</i>        | SR**   | U        | U        | VU       |          |
| SCISSOR-TAILED FLYCATCHER | <i>Tyrannus forficatus</i>      | TR     | <u>R</u> | <u>R</u> | <u>R</u> |          |
| LOGGERHEAD SHRIKE         | <i>Lanius ludovicianus</i>      | PR     | <u>U</u> | <u>U</u> | <u>U</u> | <u>U</u> |
| White-eyed Vireo          | <i>Vireo griseus</i>            | SR***  | C        | C        | C        |          |
| Bell's Vireo              | <i>Vireo bellii</i>             | TR     |          |          | R        |          |
| Yellow-throated Vireo     | <i>Vireo flavifrons</i>         | SR**   | FC       | FC       | U        |          |
| Blue-headed Vireo         | <i>Vireo solitarius</i>         | TR     | VU       |          | U        | R        |
| Warbling Vireo            | <i>Vireo gilvus</i>             | TR     | VU       | R        | VU       |          |
| Philadelphia Vireo        | <i>Vireo philadelphicus</i>     | TR     | R        |          | R        |          |
| Red-eyed Vireo            | <i>Vireo olivaceus</i>          | SR**   | C        | FC       | U        |          |
| Blue Jay                  | <i>Cyanocitta cristata</i>      | PR***  | A        | A        | A        | C        |
| American Crow             | <i>Corvus brachyrhynchos</i>    | PR**   | A        | A        | A        | A        |

| Common Name                   | Scientific Name                   | Status | Sp       | Su        | Fa       | Wi       |
|-------------------------------|-----------------------------------|--------|----------|-----------|----------|----------|
| Horned Lark                   | <i>Eremophila alpestris</i>       | TR     | VU       |           | VU       | VU       |
| Purple Martin                 | <i>Progne subis</i>               | SR     | U        | U         | U        |          |
| Tree Swallow                  | <i>Tachycineta bicolor</i>        | SR***  | VU       | VU        | VU       |          |
| Northern Rough-winged Swallow | <i>Stelgidopteryx serripennis</i> | SR**   | FC       | U         | U        |          |
| Bank Swallow                  | <i>Riparia riparia</i>            | TR     | R        | R         | VU       |          |
| Cliff Swallow                 | <i>Petrochelidon pyrrhonota</i>   | TR     | U        | R         | U        |          |
| Barn Swallow                  | <i>Hirundo rustica</i>            | SR***  | A        | A         | A        |          |
| Carolina Chickadee            | <i>Poecile carolinensis</i>       | PR***  | A        | A         | A        | C        |
| Tufted Titmouse               | <i>Baeolophus bicolor</i>         | PR***  | A        | A         | A        | C        |
| RED-BREASTED NUTHATCH         | <i>Sitta canadensis</i>           | WR     | <u>R</u> |           | <u>R</u> | <u>R</u> |
| White-breasted Nuthatch       | <i>Sitta carolinensis</i>         | PR***  | U        | FC        | FC       | FC       |
| Brown Creeper                 | <i>Certhia americana</i>          | WR     | VU       |           | VU       | U        |
| House Wren                    | <i>Troglodytes aedon</i>          | TR     | VU       |           | <u>U</u> | <u>R</u> |
| Winter Wren                   | <i>Troglodytes troglodytes</i>    | WR     | VU       |           | U        | U        |
| Marsh Wren                    | <i>Cistothorus palustris</i>      | TR     | R        |           |          |          |
| Carolina Wren                 | <i>Thryothorus ludovicianus</i>   | PR***  | A        | A         | A        | C        |
| BEWICK'S WREN                 | <i>Thryomanes bewickii</i>        | SR     | <u>R</u> | <u>VU</u> | <u>R</u> | <u>R</u> |
| Golden-crowned Kinglet        | <i>Regulus satrapa</i>            | WR     | VU       |           | U        | U        |
| Ruby-crowned Kinglet          | <i>Regulus calendula</i>          | WR     | U        |           | U        | C        |
| Blue-gray Gnatcatcher         | <i>Poliophtila caerulea</i>       | SR***  | A        | C         | C        |          |
| Eastern Bluebird              | <i>Sialia sialis</i>              | PR***  | A        | A         | A        | A        |
| Veery                         | <i>Catharus fuscescens</i>        | TR     | VU       |           | VU       |          |
| Gray-cheeked Thrush           | <i>Catharus minimus</i>           | TR     | R        |           | U        |          |
| Swainson's Thrush             | <i>Catharus ustulatus</i>         | TR     | U        |           | U        |          |
| Hermit Thrush                 | <i>Catharus guttatus</i>          | WR     | VU       |           | VU       | FC       |
| Wood Thrush                   | <i>Hylocichla mustelina</i>       | SR***  | FC       | U         | U        |          |
| American Robin                | <i>Turdus migratorius</i>         | PR***  | A        | C         | C        | A        |
| Gray Catbird                  | <i>Dumatella carolinensis</i>     | SR**   | U        | VU        | U        |          |
| Brown Thrasher                | <i>Toxostoma rufum</i>            | PR***  | FC       | FC        | FC       | U        |
| Northern Mockingbird          | <i>Mimus polyglottus</i>          | PR***  | FC       | U         | U        | U        |
| European Starling             | <i>Sturnus vulgaris</i>           | PR***  | C        | C         | FC       | C        |
| American Pipit                | <i>Anthus rubescens</i>           | TR     | VU       |           |          |          |
| Cedar Waxwing                 | <i>Bombycilla cedrorum</i>        | PR*    | VU       | VU        | VU       | U        |
| Ovenbird                      | <i>Seiurus aurocapillus</i>       | SR**   | U        | U         | U        |          |
| Worm-eating Warbler           | <i>Helmitheros vermivorum</i>     | SR**   | U        | U         | U        |          |
| Louisiana Waterthrush         | <i>Parkesia motacilla</i>         | SR***  | FC       | U         | U        |          |

| Common Name                  | Scientific Name                | Status | Sp       | Su | Fa | Wi |
|------------------------------|--------------------------------|--------|----------|----|----|----|
| Northern Waterthrush         | <i>Parkesia novaboracensis</i> | TR     | U        |    | U  |    |
| Blue-winged Warbler          | <i>Vermivora pinus</i>         | TR     | VU       |    | VU |    |
| Black-and-white Warbler      | <i>Mniotilta varia</i>         | TR     | U        | VU | U  |    |
| Prothonotary Warbler         | <i>Protonotaria citrea</i>     | SR***  | C        | FC | U  |    |
| Swainson's Warbler           | <i>Limnothlypis swainsonii</i> | SR**   | R        | R  |    |    |
| Tennessee Warbler            | <i>Oreothlypis peregrina</i>   | TR     | U        |    | U  |    |
| Orange-crowned Warbler       | <i>Oreothlypis celata</i>      | TR     | R        |    | VU | R  |
| Nashville Warbler            | <i>Oreothlypis ruficapilla</i> | TR     | R        |    |    |    |
| Connecticut Warbler          | <i>Oporornis agilis</i>        | TR     | R        |    |    |    |
| MOURNING WARBLER             | <i>Geothlypis philadelphia</i> | TR     | <u>R</u> |    | R  |    |
| Kentucky Warbler             | <i>Geothlypis formosus</i>     | SR***  | FC       | U  | U  |    |
| Common Yellowthroat          | <i>Geothlypis trichas</i>      | SR**   | C        | C  | FC |    |
| Hooded Warbler               | <i>Setophaga citrina</i>       | SR**   | U        | U  | U  |    |
| American Redstart            | <i>Setophaga ruticilla</i>     | TR     | U        | U  | U  |    |
| Cape May Warbler             | <i>Setophaga trigrina</i>      | TR     | VU       |    |    |    |
| Cerulean Warbler             | <i>Setophaga cerulea</i>       | TR     | VU       | VU | VU |    |
| Northern Parula              | <i>Setophaga americana</i>     | SR**   | U        | U  | U  |    |
| Magnolia Warbler             | <i>Setophaga magnolia</i>      | TR     | U        |    | U  |    |
| Bay-breasted Warbler         | <i>Setophaga castanea</i>      | TR     | VU       |    | U  |    |
| Blackburnian Warbler         | <i>Setophaga fusca</i>         | TR     | U        |    | U  |    |
| Yellow Warbler               | <i>Setophaga petechia</i>      | SR*    | U        | U  | R  |    |
| Chestnut-sided Warbler       | <i>Setophaga pensylvanica</i>  | TR     | U        |    | U  |    |
| Blackpoll Warbler            | <i>Setophaga striata</i>       | TR     | VU       |    |    |    |
| Palm Warbler                 | <i>Setophaga palmarum</i>      | TR     | U        |    | U  | R  |
| Pine Warbler                 | <i>Setophaga pinus</i>         | PR***  | FC       | U  | U  | VU |
| Yellow-rumped Warbler        | <i>Setophaga coronata</i>      | WR     | C        |    | C  | A  |
| Yellow-throated Warbler      | <i>Setophaga dominica</i>      | SR**   | FC       | FC | FC |    |
| Prairie Warbler              | <i>Setophaga discolor</i>      | SR***  | U        | U  | U  |    |
| Black-throated Green Warbler | <i>Setophaga virens</i>        | TR     | VU       |    | U  |    |
| WILSON'S WARBLER             | <i>Cardellina pusilla</i>      | TR     | R        |    | R  |    |
| Canada Warbler               | <i>Cardellina canadensis</i>   | TR     | R        |    |    |    |
| Yellow-breasted Chat         | <i>Icteria virens</i>          | SR**   | FC       | FC | VU |    |
| Summer Tanager               | <i>Piranga rubra</i>           | SR***  | C        | C  | C  |    |
| Scarlet Tanager              | <i>Piranga olivacea</i>        | SR**   | FC       | U  | FC |    |
| Eastern Towhee               | <i>Pipilo erythrophthalmus</i> | PR***  | FC       | FC | C  | FC |
| BACHMAN'S SPARROW            | <i>Aimophila aestivalis</i>    | SR     |          | U  |    |    |

| Common Name            | Scientific Name                  | Status | Sp       | Su | Fa       | Wi       |
|------------------------|----------------------------------|--------|----------|----|----------|----------|
| AMERICAN TREE SPARROW  | <i>Spizella arborea</i>          | TR     | <u>R</u> |    | <u>R</u> | <u>R</u> |
| Chipping Sparrow       | <i>Spizella passerina</i>        | PR***  | C        | A  | A        | U        |
| Field Sparrow          | <i>Spizella pusilla</i>          | PR***  | C        | C  | FC       | FC       |
| VESPER SPARROW         | <i>Poocetes gramineus</i>        | TR     | <u>R</u> |    |          |          |
| LARK SPARROW           | <i>Chondestes grammacus</i>      | SR     |          | R  |          |          |
| Savannah Sparrow       | <i>Passerculus sandwichensis</i> | WR     | U        |    | U        |          |
| Grasshopper Sparrow    | <i>Ammodramus savannarum</i>     | SR**   | VU       | U  | R        |          |
| Le Conte's Sparrow     | <i>Ammodramus leconteii</i>      | TR     | R        |    |          |          |
| Fox Sparrow            | <i>Passerella iliaca</i>         | WR     | VU       |    | VU       | U        |
| Song Sparrow           | <i>Melospiza melodia</i>         | WR     | VU       |    | U        | FC       |
| Lincoln's Sparrow      | <i>Melospiza lincolnii</i>       | TR     | VU       |    | U        |          |
| Swamp Sparrow          | <i>Melospiza georgiana</i>       | WR     | VU       |    | U        | U        |
| White-throated Sparrow | <i>Zonotrichia albicollis</i>    | WR     | C        |    | FC       | C        |
| White-crowned Sparrow  | <i>Zonotrichia leucophrys</i>    | WR     | VU       |    | VU       | VU       |
| Dark-eyed Junco        | <i>Junco hyemalis</i>            | WR     | U        |    | U        | A        |
| Northern Cardinal      | <i>Cardinalis cardinalis</i>     | PR***  | A        | C  | A        | A        |
| Rose-breasted Grosbeak | <i>Pheucticus ludovicianus</i>   | TR     | U        |    | U        |          |
| Blue Grosbeak          | <i>Passerina caerulea</i>        | SR***  | U        | FC | U        |          |
| Indigo Bunting         | <i>Passerina cyanea</i>          | SR***  | FC       | A  | C        |          |
| Dickcissel             | <i>Spiza americana</i>           | TR     | R        |    |          |          |
| Bobolink               | <i>Dolichonyx oryzivorus</i>     | TR     | VU       |    | R        |          |
| Red-winged Blackbird   | <i>Agelaius phoeniceus</i>       | PR***  | U        | U  | U        | U        |
| Eastern Meadowlark     | <i>Sturnella magna</i>           | PR***  | FC       | C  | FC       | U        |
| Rusty Blackbird        | <i>Euphagus carolinus</i>        | WR     | U        |    | <u>U</u> | VU       |
| Common Grackle         | <i>Quiscalus quiscula</i>        | PR***  | C        | C  | FC       | U        |
| Brown-headed Cowbird   | <i>Molothrus ater</i>            | PR***  | C        | C  | U        | U        |
| Orchard Oriole         | <i>Icterus spurius</i>           | SR***  | U        | FC | U        |          |
| Baltimore Oriole       | <i>Icterus galbula</i>           | SR*    | VU       | VU | U        |          |
| House Finch            | <i>Haemorhous mexicanus</i>      | PR**   | U        | U  | U        | U        |
| Purple Finch           | <i>Haemorhous purpureus</i>      | WR     | VU       |    | VU       | VU       |
| PINE SISKIN            | <i>Spinus pinus</i>              | WR     | <u>U</u> |    | <u>U</u> | <u>U</u> |
| American Goldfinch     | <i>Spinus tristis</i>            | PR***  | FC       | FC | C        | FC       |
| House Sparrow          | <i>Passer domesticus</i>         | PR**   | VU       | VU | VU       | VU       |

Table 2. Species registered during point counts conducted at 21 plots (10 minutes each at unlimited distance) during the breeding seasons of 2004 and 2005 at SHIL. Inds—total individuals counted.

| Species                  | Stops | 2004<br>Inds | Stops | 2005<br>Inds |
|--------------------------|-------|--------------|-------|--------------|
| Wood Duck                | 3     | 4            | 1     | 2            |
| Wild Turkey              | 2     | 2            | 3     | 6            |
| Northern Bobwhite        | 2     | 2            | 5     | 5            |
| Least Bittern            | 1     | 1            | --    | --           |
| Great Blue Heron         | 2     | 2            | 2     | 2            |
| Green Heron              | 1     | 1            | 1     | 1            |
| Red-shouldered Hawk      | 2     | 2            | 4     | 4            |
| Broad-winged Hawk        | 4     | 4            | 3     | 3            |
| Red-tailed Hawk          | 1     | 1            | 1     | 1            |
| Killdeer                 | 1     | 1            | --    | --           |
| Mourning Dove            | 5     | 10           | 12    | 14           |
| Yellow-billed Cuckoo     | 8     | 9            | 7     | 7            |
| Great Horned Owl         | 2     | 2            | 2     | 2            |
| Barred Owl               | 1     | 1            | 1     | 1            |
| Chimney Swift            | 2     | 2            | 1     | 1            |
| Ruby-thr. Hummingbird    | --    | --           | 1     | 2            |
| Belted Kingfisher        | 1     | 1            | 1     | 1            |
| Red-headed Woodpecker    | 3     | 3            | 7     | 11           |
| Red-bellied Woodpecker   | 12    | 24           | 11    | 17           |
| Downy Woodpecker         | 7     | 11           | 3     | 4            |
| Hairy Woodpecker         | 2     | 3            | 2     | 2            |
| Northern Flicker         | 5     | 7            | 5     | 6            |
| Pileated Woodpecker      | 5     | 6            | 6     | 8            |
| Eastern Wood-Pewee       | 13    | 18           | 17    | 20           |
| Acadian Flycatcher       | 13    | 22           | 7     | 14           |
| Eastern Phoebe           | 6     | 7            | 7     | 7            |
| Great Crested Flycatcher | 7     | 12           | 10    | 14           |
| Eastern Kingbird         | --    | --           | 4     | 5            |
| White-eyed Vireo         | 7     | 9            | 7     | 7            |
| Yellow-throated Vireo    | 9     | 9            | 12    | 14           |
| Red-eyed Vireo           | 21    | 40           | 19    | 35           |
| Blue Jay                 | 10    | 28           | 13    | 26           |
| American Crow            | 8     | 25           | 7     | 17           |
| Purple Martin            | 1     | 2            | 1     | 1            |
| N. Rough-wing. Swallow   | 1     | 2            | 1     | 2            |
| Carolina Chickadee       | 11    | 23           | 9     | 15           |
| Tufted Titmouse          | 17    | 36           | 17    | 37           |
| White-breasted Nuthatch  | 9     | 18           | 9     | 19           |
| Carolina Wren            | 19    | 65           | 21    | 49           |
| Blue-Gray Gnatcatcher    | 10    | 19           | 8     | 13           |
| Eastern Bluebird         | 9     | 21           | 6     | 9            |
| Wood Thrush              | 14    | 21           | 14    | 19           |
| American Robin           | 3     | 7            | 6     | 8            |
| Northern Mockingbird     | 4     | 4            | 4     | 4            |
| Brown Thrasher           | 2     | 2            | 6     | 7            |
| Cedar Waxwing            | --    | --           | 1     | 2            |
| Northern Parula          | 1     | 1            | 3     | 3            |
| Yellow Warbler           | --    | --           | 1     | 1            |
| Yellow-throated Warbler  | 2     | 2            | 1     | 2            |
| Pine Warbler             | 3     | 4            | 3     | 5            |
| Prairie Warbler          | 1     | 1            | --    | --           |

|                       |    |    |    |    |
|-----------------------|----|----|----|----|
| Prothonotary Warbler  | 3  | 14 | 4  | 10 |
| Worm-eating Warbler   | 1  | 1  | -- | -- |
| Ovenbird              | 2  | 4  | -- | -- |
| Louisiana Waterthrush | 3  | 5  | 1  | 2  |
| Kentucky Warbler      | 6  | 7  | 6  | 6  |
| Common Yellowthroat   | 1  | 1  | 3  | 5  |
| Hooded Warbler        | 3  | 3  | 3  | 3  |
| Yellow-breasted Chat  | 5  | 5  | 7  | 12 |
| Summer Tanager        | 15 | 28 | 16 | 25 |
| Scarlet Tanager       | 3  | 4  | 3  | 3  |
| Eastern Towhee        | 8  | 11 | 8  | 15 |
| Chipping Sparrow      | 8  | 29 | 7  | 11 |
| Field Sparrow         | 2  | 2  | -- | -- |
| Northern Cardinal     | 17 | 80 | 18 | 55 |
| Blue Grosbeak         | 9  | 18 | 11 | 18 |
| Indigo Bunting        | 15 | 62 | 16 | 34 |
| Red-winged Blackbird  | 1  | 4  | -- | -- |
| Eastern Meadowlark    | 2  | 2  | -- | -- |
| Common Grackle        | 2  | 4  | 1  | 2  |
| Brown-headed Cowbird  | 12 | 37 | 11 | 25 |
| Orchard Oriole        | -- | -- | 2  | 2  |
| American Goldfinch    | -- | -- | 3  | 4  |
| Total Species         |    | 67 |    | 65 |

Accepted 23 July 2014

## **REPORT OF THE TENNESSEE BIRD RECORDS COMMITTEE, 2011**

Kevin Calhoon  
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Chattanooga, TN

This report describes the actions taken by the Tennessee Bird Records Committee of the Tennessee Ornithological Society for records reviewed in 2011. Committee members and alternates who served during this period were Kevin Calhoon (secretary), Mike Todd, Bill Pulliam, Don Miller, Jan Shaw and Mark Greene; Phillip Casteel was the alternate.

Acceptance criteria remained the same throughout the year. A species is placed on the confirmed list based upon either (a) extant, verified specimen, photograph, or sound recording, each accompanied by written details; or (b) satisfactory written documentation of three independent sight records, or satisfactory written documentation or three independent observers of the same bird. Without these levels of documentation, a species is placed on the Provisional List based on one or two sight records with satisfactory written documentation. Acceptance to either list occurs if there is no more than one dissenting vote of the committee, as directed by the amended resolution at the 1998 Spring Meeting. This report contains three records with two accepted and one that was not.

### **RECORDS ACCEPTED**

White-winged Dove (*Zenaidura macroura*) - Presidents Island, Shelby County, April 30, 2011. Submitted by Scott Somershoe. Accepted: votes 6-0

Glaucous Gull (*Larus hyperboreus*) - Duck River Unit, Tennessee National Wildlife Refuge, Humphreys Co., Feb. 19, 2011. Submitted by Chris Sloan (and others). Accepted : votes 6-0

### **RECORDS NOT ACCEPTED**

Hooded Oriole (*Icterus spurius*) - Flintville, Lincoln County, July 10, 2011. Submitted by Eden Powell. Not accepted: votes 4-2 (must have at least 5 positive votes to pass). There was no doubt about the identification of this bird, but after much discussion the committee felt that origin of the bird was in question. It will not be added to the Official List of the Birds of Tennessee at this time.

### **OBSERVERS**

The committee wishes to thank Eden Powell, Chris Sloan and Scott Somershoe for submitting documentation and/or photographs.

## **MID-SOUTH RAPTOR CENTER REHABILITATION PROGRAM: A TEN YEAR REVIEW 2003 - 2012**

Knox Martin  
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Memphis, Tennessee

This is the third in a series of articles reviewing the banding and release of raptors rehabilitated by the Mid-South Raptor Center located at the Agricenter International in east Memphis (formerly the Raptor Rehabilitation Program at the Memphis Zoo and Aquarium). This article covers the years 2003 through 2012.

The center sees approximately 150 to 200 injured and orphaned raptors each year. In any given year about 60% of those birds are rehabilitated and released back into the wild. Each bird that is released is fitted with a U.S. Fish & Wildlife Service aluminum leg band. The purpose of banding each bird is to follow the progress of these released birds if one is recovered. This is important for several reasons. First, we want to know if the bird survived, and if so, for how long. Second, we need to know if the bird stayed near the release site or if it traveled away. If it moved from the original site how far did it go? Past band returns have shown that owls tend to stay close to the original release site while hawks and other diurnal releases generally moved quite a distance. This has greatly helped us in determining where to release birds as we do not want to overpopulate any given area. More care is taken in choosing a release site for owls as they will normally remain near the original release site. Hawks, however, can be released in the same area as they usually will not remain where released.

In the period of this study 328 birds were released. The most common released raptor was the American Kestrel (*Falco sparverius*), with a total of 51 individuals released. Next in numbers released was the Barn Owl (*Tyto alba*), with 45 released. The third most common released was the Barred Owl (*Strix varia*), with 29 released. The fourth was the Red-tailed Hawk (*Buteo jamaicacensis*), with a total of 24 birds released. A few of the more uncommon birds released were Golden Eagle (*Aquila chrysaetos*), Northern Harrier (*Circus cyaneus*) and Peregrine Falcon (*Falco peregrinus*).

The Mid-South Raptor Center continued working with the Kansas Department of Parks and Wildlife during the years 2003 through 2010 to release Mississippi Kites (*Ictinia mississippiensis*) in the Memphis and Mid-South areas. This program lasted over 25 years and saw a total of well over 350 birds removed from problem nests in Kansas and released in this area in an effort to reestablish the species in historic habitat along the Mississippi River. By 2010 the numbers of reported sightings of kites in the release areas had grown so large that the program was considered a success and stopped. During the eight years between 2003 and 2010 a total of 83 kites were received from Kansas and released in the Mid-South.

One interesting aspect of the release of orphaned and injured birds during this ten year period (this does not include the Kansas Kites) is that most of the birds were orphans. In 2004 a total of nineteen birds were released. Of this total eighteen were orphans. In 2007 and again in 2009 and 2012 equal numbers of babies and rehabbed birds were released.

As in past years of this study only a very small percentage of bands were returned. Most were from larger species as they were probably easier to see. The results of these returns generally agreed with the earlier findings. Diurnal species tend to be recovered quite a distance from the original release sites while nocturnal birds were recovered near their original release sites. We will continue to use the same release criteria based on these returns.

One final note has to do with changing views on specific release criteria. For many years it was standard procedure to keep one-eyed birds, especially owls, from release as it was believed that a bird with one eye could not survive. With the advent of satellite tracking of released one-eyed raptors, it has been proven that these birds survive almost as well as fully sighted birds. As a result of these findings we now routinely release one-eyed raptors.

**BANDING TOTALS - 2003 - 2012**

| SPECIES             | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | TOTAL |
|---------------------|------|------|------|------|------|------|------|------|------|------|-------|
| Turkey Vulture      |      |      |      |      |      |      |      |      |      |      | 0     |
| Golden Eagle        |      | 1    |      |      |      |      |      |      |      |      | 1     |
| Mississippi Kite    |      | 1    |      | 2    | 1    | 1    |      | 1    | 1    | 3    | 10    |
| MIKI "Kansas Kites" | 23   |      | 19   |      | 14   | 14   | 2    | 11   |      |      | 83    |
| Sharp-shinned Hawk  |      |      |      |      |      |      |      |      |      |      | 0     |
| Cooper's Hawk       | 2    |      | 1    | 3    | 1    | 5    | 3    | 1    |      |      | 16    |
| Bald Eagle          |      |      |      | 2    | 1    | 1    |      |      | 1    | 2    | 7     |
| Northern Harrier    |      |      |      | 1    |      |      |      |      |      |      | 1     |
| Northern Goshawk    |      |      |      |      |      |      |      |      |      |      | 0     |
| Red-shouldered Hawk |      |      |      | 1    |      | 1    |      |      |      | 2    | 4     |
| Broad-winged Hawk   | 1    | 1    |      |      | 2    |      | 1    | 1    | 3    | 2    | 11    |
| Red-tailed Hawk     | 2    |      | 5    |      | 4    | 5    | 4    |      | 1    | 3    | 24    |
| Barn Owl            | 8    | 6    | 1    | 8    | 4    | 1    | 7    | 1    | 7    | 2    | 45    |
| Eastern Screech Owl | 3    | 2    | 3    | 11   | 5    | 1    | 1    | 2    |      | 1    | 29    |
| Great Horned Owl    |      | 6    | 3    | 2    | 3    |      |      | 1    |      | 1    | 16    |
| Barred Owl          | 2    | 1    |      | 7    | 5    | 1    | 4    | 4    | 1    | 4    | 29    |
| American Kestrel    | 9    | 2    | 4    | 8    | 5    | 6    | 3    | 3    | 3    | 8    | 51    |
| Peregrine Falcon    | 1    |      |      |      |      |      |      |      |      |      | 1     |
| TOTAL               | 51   | 20   | 36   | 45   | 45   | 36   | 25   | 25   | 17   | 28   | 328   |

## FIRST ACCEPTED INCA DOVE RECORD FOR TENNESSEE

Theresa Graham  
Oakland, Tennessee

An Inca Dove (*Columbina inca*) was observed between 24 November – 6 December 2005 in Oakland, Fayette County, Tennessee, roughly 32 kilometers east of Memphis.

The Inca was observed in our backyard in an older suburban area. The surrounding habitat is undeveloped land and includes an open field behind our house and a small wooded lot of pecan, oak and sassafras trees as well as brush, overgrown privet and honeysuckle. The bird visited a feeding station at the back of our house, ground feeding on fallen sunflower seed. The dove was observed off and on throughout the day and usually visited anywhere from 5 to 10 minutes at a time.

Viewing conditions were excellent. All observations of the bird were made from a bedroom window. The feeding station is approximately three meters from the window so optics were not required.

The scaled appearance was the first thing that really caught my eye and alerted me this was not a Mourning Dove (*Zenaida macroura*). The Inca was usually in the company of two Mourning Doves so there was a wonderful comparison; it was about two-thirds the size. There was a heavy “scaled” appearance on the bird’s head, back, sides and wings, and it was a uniformly soft brown in color like the Mourning Doves. It lacked any other distinctive markings other than when it would occasionally flare its tail, and white outer tail feathers were seen. I never observed the red coloration in the wings. *National Geographic’s Birds of North America*, *Peterson Field Guides: Western Birds* and Cornell Lab’s website were references that were used for identification.

I noted that when in the company of the Mourning Doves, the Inca tended to be a little aggressive if one of the others got too close to where it was feeding. Other than that, it picked at seed on the ground in the same manner as the Mourning Doves.

Editors’ Note: This is the first accepted record of Inca Dove in Tennessee. There are two previous reports of Inca Dove in Tennessee which have been published but not submitted to the Tennessee Bird Records Committee for review. The details of this record are previously unpublished and included here because of their historical importance.

## BOOK REVIEW

*The Forest Unseen: A Year's Watch in Nature* – David George Haskell. 2012.  
Penguin Books, New York, NY. 270 pages.

*I believe that the forest's ecological stories are all present in a mandala sized area. Indeed, the truth of the forest may be more clearly and vividly revealed by the contemplation of a small area than it could by donning ten-league boots, covering a continent and uncovering little.* – Author's Preface

The Mandala is more than an interesting metaphor. Like the sand paintings of Tibetan monks, the one square meter patch of old growth forest described in Haskell's book is a place of observation and contemplation, from which the author's thoughts, and consequently his writings, take wing into historic and contemporary research. He describes the flight of birds, the rate of tree growth, the lives of plants and animals, the shifting weather patterns and the hexagonal ring structure of frozen water. These vignettes reveal both depth and breadth of knowledge. His acknowledgements reveal extensive research at the library of the University of the South and conversations with academic colleagues, both of which enhanced his writing.

Haskell follows the natural processes of life in the mandala throughout a year, beginning on the day of a January thaw. The lichens on the trees and rocks wait in a resting state for such a day. Plump with newly absorbed water, they cling to surfaces, showing myriad colors made possible by the fusion of fungus with algae, or in some cases, cyanobacteria. He describes this union of the two partners as obligatory. Separated, they only survive in limited habitats, primarily as sickly inhabitants of laboratories.

The lichens become a metaphor for the interconnection of all living things, and for the partnerships of life forms which have merged earlier in the history of the earth. The chloroplasts in the lichen's algae and the mitochondria found in plants, animals and fungi have their own DNA, and are now believed to have been separate organisms, absorbed by others and now wholly dependent on them. The concept of host and separate entity has lost its meaning in their lives. They are part and parcel of one life.

From that discussion, Haskell moves on to describe the parasitic life cycle of a horsehair worm observed in the mandala, a life of piracy. Far from the cooperative arrangement of lichens, the horsehair worm kills its cricket host, causing it to drown in water. By that time, the cricket is an empty shell, a home for the worm. Nevertheless, both cricket and worm contain mitochondria which are partners in their macabre dance.

So ends chapter one, but Haskell does not limit his discussion to the life forms found in the mandala. He next proceeds to the hexagonal structure of snowflakes. He describes the research of Johannes Kepler, who "took time away from elucidating the motions of the planets to meditate on the snowflake." Kepler looked to the six sided arrangement of honeycombs and pomegranate seeds for an explanation. Haskell states that Kepler might have unraveled his mystery had he accepted the then unfashionable theory of the atom.

Though Haskell explores a few other nonliving phenomena revealed through the lens of the mandala, he is a biologist by training. Though he speaks of such physical factors as earthquakes and weather, he spends far more time discussing the rich texture of life forms and their struggle for survival.

Winter survival, or perhaps survival of environmental stress throughout the seasons, is one of many thematic strands which Haskell weaves through the narrative of his discoveries. He contrasts his own limited ability to survive a January freeze to that of Carolina Chickadees who add more body fat and downy feathers to live through a brief outbreak of cold weather. He tells of a Sharp-shinned Hawk spotted as he approached the mandala, and this leads to a discussion of local non-migratory individuals, and northern individuals who are migrating less with passing years. This decline in the number of northern migrants is a result of bird feeders, rich with sunflower seeds, which become feeding stations for birds and for species which prey on birds. The Sharp-shinned Hawk is one of these.

Plants are not exempt from his descriptions. Haskell reveals how trees add a new layer of phloem each year because winter weather damages their living tissue. Non-woody plants may add loads of sugars to preserve cell structure. Herbaceous plants add a purple pigment to protect their cells from sun damage on days when chloroplasts have shut down.

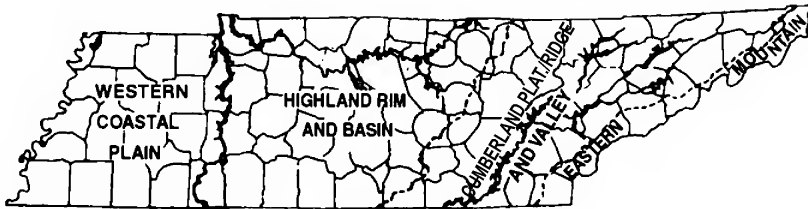
From the mating habits of snails to the migration of warblers, Haskell reveals a new facet of the natural world with each visit to his mandala. He arranges these descriptions as a calendar, reminiscent of Aldo Leopold's book, *A Sand County Almanac*. With this book, the author joins an elite club of nature writers which include Thoreau, Leopold, and Bartram, to name only a few.

Haskell's use of a square meter of forest as the launching point for these discussions makes sense as a concept that I can only express as microcosm. Commonly understood as a small portion which represents the whole, it is in fact a small portion which reveals the nature of the whole. It is derived from the same word as cosmos. The book is an excellent read for birdwatchers and anyone else who spends time observing nature. I was not surprised to learn that it was a finalist for the Pulitzer Prize in General Nonfiction.

Ray Zimmerman, Chattanooga, Tennessee

## THE SUMMER SEASON

Richard L Knight, Editor



1 June - 31 July 2012

Record heat scorched the state beginning in late June with widespread triple-digit temperatures. This heat wave persisted through July. Precipitation varied tremendously, ranging from drought conditions in West Tennessee to record rainfall amounts in the northeastern part of the state. The extreme heat evidently kept many birders inside, although those who did venture out found some rewards. A few noteworthy breeding records were reported, including American Coot and Yellow-bellied Sapsucker in East Tennessee. Summering Sandhill Cranes at two sites were quite unusual. White-winged Doves were present at a Shelby County site again this summer.

### Standard Abbreviations

ad - adult  
BBS - Breeding Bird Survey  
Co - County  
Cr - Creek  
ers- earliest reported  
et al. - and others  
fide - reported by  
im - immature

L - Lake  
m.ob. - many observers  
Mtn - Mountain  
NWR - National Wildlife Refuge  
R - River  
SP - State Park  
WMA - Wildlife Management Area  
yg - young

**WESTERN COASTAL PLAIN REGION** - - The summer of 2012 was hard on birds and birders alike. Temperatures were well above normal throughout the period and the unrelenting drought continued, with little measurable rainfall across the region. Fewer reports from the field were received than for any period in recent memory.

*Duck - Dove:* **Ruddy Duck:** 17 Jul (1) Ensley (Gail King). **Northern Bobwhite:** 10 Jun (9) Ensley (Virginia Reynolds). Tri-colored Heron: 14 Jul (1 im) Horn L Cut-off, Shelby Co (Jeff Wilson). Osprey: 9 Jun (2, carrying nest material) Reelfoot L, Obion Co (Bill Pulliam). **Mississippi Kite:** 24 Jul (1) near Paris, Henry Co (Shawna Ellis). Least Tern: 9 Jun (4)

Reelfoot L, Lake Co (Bill Pulliam). **White-winged Dove:** 10 Jun (pair) President's Island, Shelby Co (Jeff Wilson).

*Flycatcher - Sparrow:* **Scissor-tailed Flycatcher:** 26 Jun (2 pairs) Hardin Co, west of Tennessee R (Allan Trently). **Loggerhead Shrike:** 16 Jun (3 ad, 4 im) Thorny Cypress WMA (DDP, Gaynell Perry). **Cliff Swallow:** 16 Jun (1890 birds and 1000+nests) I-55 Mississippi R bridge, Dyer Co (DDP, Gaynell Perry). **Lark Sparrow:** 9 Jun (1) Whiteville, Hardeman Co (DDP). **Grasshopper Sparrow:** 15 Jun (1) Thorny Cypress WMA (DDP).

*Locations:* Ensley, Shelby Co; Thorny Cypress WMA, Dyer Co.

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**HIGHLAND RIM AND BASIN REGION** - - Like last year, the two month summer season was exceptionally hot in Middle Tennessee. In June the average Nashville temperature was 1.4 degrees above average, and on the 29th of that month, Nashville experienced 109° F, the hottest temperature in its 141 years of record keeping. The heat wave continued into July, resulting in a monthly average temperature that was 4.1 degrees above normal. Precipitation for the two months could not have been more different. In June Nashville barely recorded one-quarter inch of rain. Weather patterns changed dramatically during the next month, and Nashville recorded its fourth wettest July on record, receiving 8.4 inches.

*Swan - Crane:* **Trumpeter Swan:** 19 Jun thru Jul (2) Williamson Co (fide Chris Sloan, m.ob.), origin unknown. **Red-breasted Merganser:** 1 Jul (1) Center Hill L, DeKalb Co (Melinda Welton). **American White Pelican:** 19 Jul (3) Duck R Unit (CF). **Little Blue Heron:** 27 Jul (50+, mostly im) Duck R Unit (SGS), max. **Tricolored Heron:** 31 Jul (2 im) Duck R Unit (Ruben Stoll). **Yellow-crowned Night-Heron:** 12 Jun (1 ad) marsh on Walter S. Davis Blvd, Nashville (Frank Fekel); 25 Jun (2 im) Little Elder Island in Woods Reservoir (KBu, KW), within large mixed rookery (see spring report). **Mississippi Kite:** 26 Jun (6) Hardin Co, just east of Tennessee R (Jud Johnston). **Golden Eagle:** 2 Jul (1 im) near Cordell Hull L, Smith Co (fide Polly Rooker), found emaciated and taken to rehabilitation facility; it died a month later. **Sandhill Crane:** 14 Jun (1) Duck R Unit (CF) present since May.

*Sandpiper - Tern:* **Solitary Sandpiper:** 13 Jul (1) Gateway Pond (TJW, SGS, SZ), ers. **Willet:** 12 Jul (3) Gateway Pond (SZ). **Western Sandpiper:** 13 Jul (1) Gateway Pond (TJW, SGS, SZ). **Short-billed Dowitcher:** 12-13 Jul (1) Gateway Pond (TJW, m.ob.). **Wilson's Snipe:** 19 Jul (1) Duck R Unit (CF), very early. **Caspian Tern:** 19 Jul (4) Duck R Unit (CF), ers. **Black Tern:** 3 Jun (1) Woods Reservoir (Tim Jeffers). **Common Tern:** 3 Jun (6) Woods Reservoir (Tim Jeffers, photo).

*Nightjar - Sparrow:* **Chuck-will's-widow:** 3 Jun (75) Cedars of Lebanon SP and State Forest, Wilson Co (SGS); 6 Jun (111) Wilson and Rutherford Cos (SGS); no route overlap. **Scissor-tailed Flycatcher:** 9 Jun (2 ad, 3 yg) Rutherford Co (TJW, m.ob.); 13 Jun (pair, nest) Nashville Speedway, Wilson Co (SZ); 26 Jun (2) Hardin Co, east of Tennessee R (Jud Johnston); 26 Jul (1) Springfield, Robertson Co (Tony Lance), 1st Co record. **Loggerhead Shrike:** 3 Jun (1) Sumner Co (John Froeschauer). **Purple Martin:** 18 Jul (80,000+) Nashville (SGS), at roost. **Sedge Wren:** 27 Jul (2) Duck R Unit (SGS). **Gray Catbird:** 23 Jun (1) Nashville (Jan Shaw). **Cerulean Warbler:** 3 Jun (2) Macon Co (John Froeschauer). **Lark Sparrow:** 19 Jun (1) Petersburg BBS, Marshall Co (David Vogt); 25 Jun (1) Coffee Co (KBu, KW); 11 Jul (1 ad, 3 imm) Kimbro Rd, Rutherford Co (Daniel Estabrooks). **Grasshopper Sparrow:** 9 Jul (9) Warren Co (Susan McWhirter).

*Locations:* Duck R Unit - unit of Tennessee NWR, Humphreys Co; Gateway Pond, Rutherford Co; Woods Reservoir, Franklin Co.

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**CUMBERLAND PLATEAU / RIDGE and VALLEY REGION** - - June began with cooler than average temperatures, but finished with a record heat wave. A reading of 103° F on the last day of June set an all-time high temperature at Tri-cities Airport. July was hotter than normal also, being 2.9 degrees above average in Chattanooga. Rainfall was scarce in June, but extensive rain in July offset the shortfall that had occurred since April. Over 12 inches of rain in July established this as the wettest month on record in the Tri-cities. While Chattanooga received only half this amount, it was still two inches above average for the month, though Brainerd Levee and Standifer Gap Marsh were rather dry for most of the season resulting in no reports of Least Bittern or Virginia Rail. A successful nesting by Bald Eagles in Sullivan County is part of a growing population of breeding eagles in East Tennessee. An American Coot with young at Kingsport represents one of very few breeding records ever in the state.

*Duck - Crane:* **Blue-winged Teal:** 9 Jun (1 male) Bible Refuge (DHM). **Ring-necked Duck:** 28 Jun (1 female) Eagle Bend (RDH, DMy). **Common Loon:** 7 Jun (2) L Tansi, Cumberland Co (EKL), 1 in breeding plumage and 1 in winter plumage. **Double-crested Cormorant:** 29 Jul (240) Rankin Bottoms (MBS), max. **Great Egret:** 29 Jul (150) Rankin Bottoms (MBS), max. **Snowy Egret:** 21 / 30 Jul (2 / 1) Bible Refuge (DHM / KBu, KW); 29 Jul (1) Rankin Bottoms (MBS). **Little Blue Heron:** 21 Jul (2 im) Greene Co (DHM); 22 / 29 Jul (5 im / 1 ad, 11 im) Rankin Bottoms (MBS); 29 Jul - 3 Aug (1 im) Washington Co (RLK, m.ob.); 30 Jul (9 im) Bible Refuge (KBu, KW). **Yellow-crowned Night-Heron:** 24 Jun (1 ad) Polk Co (Kevin Calhoon, Ben Stenger), apparently 1st Co record; 5 Jul (1 ad) Beaver

CR, Knox Co (Walter Hill fide Kelly Roy, Dean Edwards). **Osprey**: 16 Jun (1) Greene Co (DHM); 6 Jul (1) Bristol (JWC, Michele Sparks). **Bald Eagle**: late Jun (2 yg fledged) South Holston R, near Bluff City, Sullivan Co (JWC, m.ob.), 1st nest in Co. **Northern Harrier**: 4 Jun (1) Greene Co (DHM). **Broad-winged Hawk**: 23 Jul (2 nestlings fledged) Kingsport (Jim Wright, Lisa Wright, JWC, et al.), this establishes a new late date for nestlings in TN according to the Breeding Bird Atlas. **Peregrine Falcon**: 6 Jul (1) Bristol (JWC, Michele Sparks). **American Coot**: 19 Jul (1-2 ad with 2 nearly half-grown yg) Kingsport (RLK), in cattail pond at Meadowview golf course, 1st breeding record in NE TN; 11 Jul (4) John Sevier L, Hawkins Co (Susan Hubley). **Sandhill Crane**: 9 Jun - 17 Jul (1) Bible Refuge (DHM et al.).

*Sandpiper - Owl*: **Spotted Sandpiper**: 30 Jun (1) Upper Douglas L, Cocke Co (DHM), ers. **Solitary Sandpiper**: 12 Jul (1 / 2) Washington Co / Eagle Bend (RLK / RDH, DMY), ers. **Greater and Lesser Yellowlegs**: 12 Jul (2 / 1) Eagle Bend (RDH, DMY), ers. **Least Sandpiper**: 3 Jul (2) Eagle Bend (RDH, DMY), ers. **Pectoral Sandpiper**: 20 Jul (4) Eagle Bend (CE, Lola Estes), ers. **Short-billed Dowitcher**: 12 Jul (1) Washington Co (RLK), ties early arrival date in NE TN; 12 Jul (2) Eagle Bend (RDH, DMY). **Barn Owl**: thru season (1-3) Bible Refuge (DHM, m.ob.); 12 Jun (1, road kill) I-75 near Lenoir City, Loudon Co (Charles Nicholson); 7 Jul (3) Paddle CR, Sullivan Co (RRK).

*Flycatcher - Dickcissel*: **Willow Flycatcher**: 5 Jun (1) Cleveland (David Chaffin); 7 Jun (1) Cumberland Co (EKL); 9 Jun - 21 Jul (2) Bible Refuge (DHM). **Blue-headed Vireo**: 17 Jun (1) Elder Mtn, Marion Co (Tommie Rogers), rare breeder in SE TN. **Cliff Swallow**: 26 Jul (several nests with yg, likely second broods) Kingsport (Rick Phillips), new late date for nestlings in TN according to the Breeding Bird Atlas. **Swainson's Warbler**: 10 / 13 Jun (1) Bradley Co (Marty Paige / David Chaffin). **Savannah Sparrow**: 4 May thru Jul (4+ at 2 sites) Limestone (RLK). **Rose-breasted Grosbeak**: 15 Jul (1 male, at feeder) Clinch Valley, Hawkins Co (Ron Lapp, Rose Lapp); 15 Jul (1) Tusculum, Greene Co (DHM); both likely post-breeding dispersals. **Dickcissel**: thru 22 Jul (6-8 males at 4 sites) Limestone (RLK, m.ob.); 7 Jun (9 males) Shadow Mtn Estates, Cumberland Co (EKL); 9 Jun - 21 Jul (13 at 6 sites) Greene Co (DHM et al.); 20 Jun into Aug (1-2 males) Riverside Rd, Sullivan Co (Wilma Boy, Lois Cox, JWC); 11 / 25 Jul (1) Paddle CR, Sullivan Co (JWC); 26 Jul (1) Kingsport (RLK), likely a migrant.

*Locations*: Bible Refuge - unit of Lick CR Bottoms WMA, Greene Co; Eagle Bend - fish hatchery, Anderson Co; Limestone, Washington Co; Rankin Bottoms, Cocke Co.

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**EASTERN MOUNTAIN REGION** - - It was another hot summer in the mountain region. Overall, June was only slightly warmer than normal. However, temperatures during the last week of June soared to record highs. July was 3 degrees above normal. June was dry, with precipitation 3 inches below normal, while July was very wet at 8 inches above normal.

An active Great Blue Heron nest at Watauga Lake was the first nesting record for Carter County. A Yellow-bellied Sapsucker nest was another good find in Carter County. Good numbers were reported for Alder Flycatcher, Hermit Thrush, and Magnolia Warbler.

*Duck - Sapsucker:* **Blue-winged Teal:** 9 Jun (1) Watauga R, Carter Co (Jean Potter, Kathy Noblet). **Great Blue Heron:** 26 May (1, on nest) / 12 Jun (pair with 2 yg in nest) Watauga L, near dam, Carter Co (Michele Sparks), 1st nest in Co. **Osprey:** 27-28 Jul (1) Watauga R at Elizabethton, Carter Co (Fred Alsop). **Peregrine Falcon:** 27 Jun (1) Doe River Gorge, Carter Co (RLK), continuation of spring presence. **American Woodcock:** 9 Jun (2) Carver's Gap on Roan Mtn (RLK, John Hay, Jim Anderson); 18 Jun - 10 Jul (1-2) Hampton CR Cove, Carter Co (Nora Schubert). **Mourning Dove:** thru season (1-2) Carver's Gap on Roan Mtn (RLK), unusual at high elevation. **Black-billed Cuckoo:** 7 / 9 Jun (1) Hampton CR Cove, Carter Co (Fred Alsop / RRK, Glen Eller). **Yellow-bellied Sapsucker:** 9 Jun (pair feeding yg in nest) Miller L, Carter Co (Glen Eller, RRK).

*Flycatcher - Warbler:* **Alder Flycatcher:** thru season (20+) Carver's Gap to Grassy Ridge on Roan Mtn (Katie Quillin, m.ob.), nest with 3 eggs at Carver's Gap on 21 Jun. **Willow Flycatcher:** 13 Jun / 6 Jul (6) Shady Valley (RLK / Rob Biller, Ron Carrico), max. **Tree Swallow:** 26 Jun (300+) Orchard Bog, Shady Valley (Richard Lewis), early grouping of mostly first-year birds. **Carolina Wren:** 22 / 29 Jun (2-1) Roan Mtn at 5900 ft. (RLK), post-breeding wanderers. **Golden-crowned Kinglet:** 7 / 28 Jun (2 / 4) Unaka Mtn (RLK). **Hermit Thrush:** thru season (5+) Roan Mtn (RLK, m.ob.); 28 Jun (2) Unaka Mtn (RLK). **Brown Thrasher:** thru season (2) Carver's Gap on Roan Mtn (RLK), unusual at high elevation. **Swainson's Warbler:** 8 Jun (1) Buffalo Mtn, Washington Co (RLK, RDH, DMy); 16 Jun (2) Bald Mtn, Greene Co (DHM). **Magnolia Warbler:** 18 May into Jul (3-5 males) Unaka Mtn (RLK, RRK, m.ob.); 30 May into Jul (3-4 males) Roan Mtn (RLK).

*Sparrow - Siskin:* **Vesper Sparrow:** thru season (3+ pairs) grassy balds on Roan Mtn (RLK, m.ob.). **Savannah Sparrow:** 9 Jun (1) Walnut Mtn Rd, Carter Co (Kim Stroud, Don Holt, Dianne Draper, Mary Anna Wheat). **Dark-eyed Junco:** 8 Jun (1, singing) Buffalo Mtn Washington Co (RLK, RDH, DMy), at the low elevation of 2600 ft, likely the 1st breeding season record in Co. **Indigo Bunting:** thru season (8-10 males) Roan Mtn summit (RLK), unusual at high elevation. **Bobolink:** 3 Jun (1 male) Quarry Bog in Shady Valley (Rob Biller, David Kirschke). **Eastern Meadowlark:** 19 Jun (1) Round Bald on Roan Mtn (RLK), although occasional in fall and early winter, this may be the 1st summer record. **Brown-headed Cowbird:** thru Jun (pair) Roan Mtn (RLK, et al.), at 4450 ft elevation. **Red Crossbill:** 21 Jun (5) Roan Mtn (RLK), max. **Pine Siskin:** thru season (2-6) Roan Mtn, at 4450 ft and (1-2) Roan Mtn, in spruce-fir forest (RLK, m.ob.).

*Locations:* Roan Mtn, Carter Co; Shady Valley, Johnson Co; Unaka Mtn, Unicoi Co.

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## INSTRUCTIONS TO AUTHORS

*The Migrant* records observations and studies of birds in Tennessee and adjacent areas.

**SUBMISSIONS:** The original and two copies of the manuscript should be sent to the Co-Editors: Susan McWhirter, 1760 Rayburn Walling Rd., Rock Island, TN 38581 [snmcwhirter@gmail.com](mailto:snmcwhirter@gmail.com) or Martha Waldron, 1014 Murray Hill Lane, Memphis, TN 38120 [martha.waldron@gmail.com](mailto:martha.waldron@gmail.com). Manuscripts that have been published in other journals should not be submitted.

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